

# **STUDY OF SERUM LEVEL OF CHEMERIN- A NOVEL MARKER**

## **OF METABOLIC SYNDROME**

### **BACKGROUND:**

Cardiovascular disease is one of the major alarming cause of morbidity and mortality. Obesity is a major risk factor for the CVD. Chemerin is a novel adipokine secreted by adipocytes which has role in the metabolism of adipose tissue and in immune response regulation which is important in the pathogenesis of the metabolic syndrome. Estimation of this adipokine could benefit in the early detection of metabolic syndrome .

### **AIMS AND OBJECTIVES**

To estimate serum chemerin as a marker of metabolic syndrome. To study the relation between the levels of serum chemerin with individual components of metabolic syndrome and to evaluate the association of Chemerin with CAD risk in individuals with metabolic syndrome.

### **MATERIALS AND METHODS**

This cross-sectional study was conducted at MGMGH,Trichy. Anthropometric measurements BMI, WC and HC are taken. Serum analyses done for chemerin, , triacylglycerides, total cholesterol, HDLcholesterol, and glucose in 45 healthy subjects and 45 subjects metabolic syndrome . LDL ,VLDL,CRI I,CRI II ,AC & AIP were calculated .Data was expressed as Mean  $\pm$  Standard Deviation.

### **RESULTS**

Student t-test and Pearson's correlation were used to compare the variables. A p value of  $\leq 0.05$  is considered statistically significant. Subjects with Met S had significantly higher serum chemerin levels than controls (mean 260.40 vs.93.11 ng/ml  $P < 0.01$ ). There is positive correlation of chemerin levels with Met S parameters such as WC,BP,TAG,FBG ( $P < 0.01$ ).The

atherogenic indices CRI I, CRI II ,AC and AIP increases linearly with increase in serum chemerin level ( $P < 0.01$ ).

### **CONCLUSION:**

The present study demonstrated that serum chemerin levels are significantly increased in persons with Met S. The chemerin levels increases progressively as the number of components of Met S increases and there is a statistically significant positive linear correlation between Chemerin levels and newer atherogenic indices. Hence the estimation of chemerin may be used as marker for early prediction of atherosclerosis as well as Metabolic Syndrome.

**KEY WORDS:** Cardiovascular disease, Metabolic Syndrome, Atherosclerosis, Chemerin, Adipokine Anthropometric measurements, Atherogenic indices.